POCKET COMPUTER
NEWSLETTER

A

LOADER*/MONITOR/DISASSEMBLER

PACKAGE

for the

SHARP PC-1500

and the

RADIO SHACK PC-2

POCKET COMPUTERS

professionally crafted by:

Norlin Rober

(*An assembler that operates on machine code instead of mnemonics!)

THE MASTER CRAFSTMAN SCULPTS THE ULTIMATE TOOL!

Norlin Rober, internationally recognized by PCN readers as an authority on machine language programming the Sharp PC-1500 and Radio Shack PC-2 pocket computers, has come up with what may well be the ultimate PC-resident tool for users of these popular machines who wish to program in machine language. After literally hundreds of hours of dedicated program development, he has come up with an extremely powerful and effective tool, *the majority of which is itself constructed using PC machine language!* This gives the package unprecedented speed and versatility.

It is a *combined* Loader (capable of assembling labeled machine code into machine-executable instructions), Monitor (for easily examining and controlling the operation of machine language routines), and Disassembler (that converts machine codes to mnemonics so that instruction sequences in RAM and ROM may be studied in detail).

What is more, this entire fantastic package resides in less than 4K of memory so that, in a 10K system (required for operation), the user can have *over 6K of combined machine language and BASIC programs!* Yes, now you can easily put together "hybrid" packages that utilize a combination of BASIC and machine language routines.

Operation is Simple

Norlin has made this package a cinch for novice or expert alike to operate. All of the fundamental commands may be executed from the keyboard using user-defined keys. Once a desired function has been selected, the program automatically prompts you for any information necessary to complete initiating the action. All of the commands are mnemonically related to the operations they perform.

The built-in disassembler is a great boon in two particular areas. First of all it may be used to verify proper loading of a machine language routine or program created by the user. Secondly, it can bare the deepest secrets of the ROMs that are within these PCs. Remember, these ROMs contain literally hundreds of valuable routines that are accessible to the knowledgeable programmer. As a matter of fact, using this LMD package, you can even uncover and study the contents of ROMs contained in peripherals such as the CE-158 Communications

Interface or CE-150 Printer/Cassette Interface.

Complete Capabilities

You have all the machine language manipulating capabilities you need in a pocket computer environment. Just look at the built-in commands that can be invoked using the "defined" keys:

DEF C	Convert to hexadecimal equivalent.
DEF V	View contents of memory.
DEF H	Hunt through memory for specified byte.
DEF S	Store code into memory.
DEF D	Disassemble code into mnemonics.
DEF L	List codes or mnemonics using printer.
DEF J	Jump to ML program.
DEF M	Move block of memory.
DEF B	Breakpoint set in user's ML program.
DEF F	Fix ML program following breakpoint error.
DEF A	Assemble source code into object code.
DEF X	Exit from View, Hunt, Store or Disassembler.

In addition to these readily invoked commands, additional directives allow you to easily save source code, object code and BASIC routines to and from cassette tape as well as obtain listings of source code and any BASIC directives.

Labeling Machine Code

The loader program provided as part of this package allows the machine language programmer to use labels to identify addresses and to utilize these labels in jumps, branches, calls and certain classes of data instructions. This unique technique greatly simplifies the preparation of address-dependent object code. It is no longer necessary to actually count the number of bytes between a branch instruction and a transfer address. Data locations can be specified using labels. Program modifications are thus easy to implement. The LMD program may be used to determine new address references in machine code sequences.

A Complete Ready-To-Use Package

The LMD package is provided complete and ready to be put to work. You receive a tape containing the combination Loader/Monitor/Disassembler ready to

be loaded into your Sharp PC-1500 or Radio Shack PC-2 pocket computer. You receive a comprehensive set of operating instructions, written by *Norlin Rober* himself. The accompanying documentation also includes tables listing all the machine language instructions and the mnemonics that the LMD package uses to represent those instructions. There is also a complete listing of the machine codes and BASIC routines used in this hybridized (combination machine language and BASIC programming) package. This is a complete stand-alone package. You do not need to refer to issues of *PCN* in order to make use of and utilize this powerful machine language programmer's aid.

Equipment Needed

You need a Sharp PC-1500 or Radio Shack PC-2 pocket computer equipped with an 8K RAM module such as a CE-155 or equivalent. (*Note: This program will not operate with a battery-backed ROM/RAM module such as the CE-159 module!*) In order to load the program into memory from the supplied tape you will need a tape cassette interface. To make maximum use of the LMD's capabilities you will want to have a printer (such as the CE-150 or equivalent). However, once the program is loaded, it may be used in many applications without having a printer connected.

How to Order the LMD Package

Use the convenient order form provided here. Order now for fast service!

ORDER TODAY AND START DOING MACHINE LANGUAGE PROGRAMMING IN A NEW PROFICIENT WAY!

HOW TO ORDER THE LMD PACKAGE BY MAIL

You may send in your order on this coupon. Please enclose payment. Note that prices include shipping by method of our choice. We normally ship by first class mail in the United States, Canada and Mexico. Air mail is used elsewhere.

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